

# ENTERED



OIPF

## RAW SEQUENCE LISTING

DATE: 03/24/2003

PATENT APPLICATION: US/10/034,015A

TIME: 10:09:53

Input Set : N:\CrF4\03102003\J034015.raw

Output Set: N:\CRF4\03242003\J034015A.raw

```

1 1100 APPLICANT: Loughney, Kate
2 1200 TITLE OF INVENTION: Phosphodiesterase 10
3 1300 FILE REFERENCE: 27:66/35308
4 1400 CURRENT APPLICATION NUMBER: US/10/034,015A
5 1410 CURRENT FILING DATE: 2001-12-20
6 1500 PRIOR APPLICATION NUMBER: 60/075,505
7 1510 PRIOR FILING DATE: 1998-02-23
8 1600 NUMBER OF SEQ ID NOS: 26
9 1700 SOFTWARE: PatentIn Ver. 2.0
10 1810 SEQ ID NO: 1
11 1811 LENGTH: 1543
12 1812 TYPE: DNA
13 1813 ORGANISM: Homo sapiens
14 1820 FEATURE:
15 1821 NAME/KEY: CDS
16 1822 LOCATION: (26)..(1423)
17 4000 SEQUENCE: 1
18      cccaaaggccca tctacatggga catcg atg gac gca ttc aga agc act ccc tac      52
19                                     Met Asp Ala Phe Arg Ser Thr Pro Tyr
20                                     1               5
21
22      aaa gtg aga cct gtg ggc atc aag caa ctc tcc gag aga gaa gaa tta      100
23      Lys Val Arg Pro Val Ala Ile Lys Gln Leu Ser Glu Arg Glu Glu Leu
24      10               15               20               25
25      att cag agc gtg ctg ggc cag gtt gca gag cag ttc tca aga gca ttc      148
26      Ile Gln Ser Val Leu Ala Gln Val Ala Glu Gln Phe Ser Arg Ala Phe
27      30               35               40
28      aaa atc aat gaa ctg aaa gct gaa gtt gca aat cac ttg gct gtc cta      196
29      Lys Ile Asn Glu Leu Lys Ala Glu Val Ala Asn His Leu Ala Val Leu
30      45               50               55
31      gag aaa cgc gtg gaa ttg gaa gga cta aaa gtg gtg gag att gag aaa      244
32      Glu Lys Arg Val Glu Leu Gln Gly Leu Lys Val Val Glu Ile Glu Lys
33      60               65               70
34      tgc aag agt gac att aag aag atg agg gag gag ctg ggc ggc aga agc      292
35      Cys Lys Ser Asp Ile Lys Lys Met Arg Glu Glu Leu Ala Ala Arg Ser
36      75               80               85
37      agc agc acc aac tgc ccc tgt aag tac agt ttt ttg gat aac cac aag      340
38      Ser Arg Thr Asn Cys Pro Cys Lys Tyr Ser Phe Leu Asp Asn His Lys
39      90               95               100               105
40      aag ttg acg cct cca cgc gat att acc att tac ccc aag tac ctg ctc      388
41      Lys Leu Thr Pro Arg Arg Asp Val Pro Thr Tyr Pro Lys Tyr Leu Leu
42      110               115               120
43      ttt cca gag acc atc gag gct ctg ctg aag cgc att ttt gac ttc tgg      436
44      Ser Pro Gln Thr Ile Gln Ala Leu Arg Lys Pro Thr Phe Asp Val Trp

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/034,015A

DATE: 03/24/2003

TIME: 10:09:53

Input Set : N:\CrF4\03102003\J034015.raw

Output Set: N:\CRF4\03242003\J034015A.raw

45		125		130		135		
46	ctt tgg gag cct aat gag atg ctg agc tgc ctg gag cac atg tac cac							464
47	Leu Trp Glu Pro Asn Glu Met Leu Ser Cys Leu Glu His Met Tyr His							
48		140		145		150		
49	gac ctc ggg ctg gtc agg gac ttc agc atc aac cct gtc acc ctc agg							532
50	Asp Leu Gly Leu Val Arg Asp Phe Ser Ile Asn Pro Val Thr Leu Arg							
51		155		160		165		
52	agg tgg ctg ttc tgc gtc cac gac aac tac aga aac aac ccc ttc cac							580
53	Arg Trp Leu Phe Cys Val His Asp Asn Tyr Arg Asn Asn Pro Phe His							
54		170		175		180		185
55	aac ttc cgg cac tgc ttc tgc gtc gcc agc atg atg tac agc atg gtc							623
56	Asn Phe Arg His Cys Phe Cys Val Ala Gln Met Met Tyr Ser Met Val							
57		190		195		200		
58	tgg ctc tgc agt ctc cag gag aag ttc tca caa acc gat atc atg atc							676
59	Trp Leu Cys Ser Leu Gln Glu Lys Phe Ser Gln Thr Asp Ile Leu Ile							
60		205		210		215		
61	cta atg aca ggg gcc atc tgc cac gat ctg gac cat ccc ggc tac aac							724
62	Leu Met Thr Ala Ala Ile Cys His Asp Leu Asp His Pro Gly Tyr Asn							
63		220		225		230		
64	aac acc tac cag atc aat gcc cgg aca gag ctg gcc gtc cgc tac aat							772
65	Asn Thr Tyr Gln Ile Asn Ala Arg Thr Glu Leu Ala Val Arg Tyr Asn							
66		235		240		245		
67	gac atc tca cgg ctg gag aac cac cac tgc gcc gtc gcc ttc cag atc							820
68	Asp Ile Ser Pro Leu Glu Asn His His Cys Ala Val Ala Phe Gln Ile							
69		250		255		260		265
70	ctc gcc gag cct gag tgc aac atc ttc tcc aac att cca cct gat ggg							863
71	Leu Ala Glu Pro Glu Cys Asn Ile Phe Ser Asn Ile Pro Pro Asp Gly							
72		270		275		280		
73	ttc aag cag atc cga cag gga atg atc aba tta atc ttg gcc cct gac							916
74	Phe Lys Gln Ile Arg Gln Gly Met Ile Thr Leu Ile Leu Ala Thr Asp							
75		285		290		295		
76	atg gca aga cat gca gaa att atg gat tct ttc aaa gag aaa atg gag							964
77	Met Ala Arg His Ala Glu Ile Met Asp Ser Phe Lys Glu Lys Met Glu							
78		300		305		310		
79	aat ttt gac tac agc aac gag gag cac atg acc ctg ctg aag atg att							1012
80	Asn Phe Asp Tyr Ser Asn Glu Glu His Met Thr Leu Leu Lys Met Ile							
81		315		320		325		
82	ttg ata aaa tgc tgt gat atc tct aac gag gtc cgt cca atg gaa gtc							1060
83	Leu Ile Lys Cys Cys Asp Ile Ser Asn Glu Val Arg Pro Met Glu Val							
84		330		335		340		345
85	gca gag cct tgg gtc gac tgt tta tta gag gaa tat ttt atg cag agc							1108
86	Ala Glu Pro Trp Val Asp Cys Leu Leu Glu Glu Tyr Phe Met Gln Ser							
87		350		355		360		
88	gac cgt gag aag tca gaa ggc ctt cct gtc gca cgg ttc atg gac cga							1156
89	Asp Arg Glu Lys Ser Glu Gly Leu Pro Val Ala Pro Phe Met Asp Arg							
90		365		370		375		
91	gac aaa gtc acc aag gcc aca gcc cag att ggg ttc atc aag ttt gtc							1204
92	Asp Lys Val Thr Lys Ala Thr Ala Gln Ile Gly Phe Ile Lys Phe Val							
93		380		385		390		

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/034,015A

DATE: 03/24/2003

TIME: 10:09:53

Input Set : N:\Crf4\03102003\J034015.raw

Output Set: N:\CRF4\03242003\J034015A.raw

```

94      ctg atc cca atg ttc gaa aca gtg acc aag ctc ttc ccc atg gtt gag      1282
95      Leu Ile Pro Met Phe Glu Thr Val Thr Lys Leu Phe Pro Met Val Glu
96      395                      400                      405
97      gag atc atg ctg cag cca ctt tgg gaa tcc cga gat cgc tac gag gag      1300
98      Glu Ile Met Leu Gln Pro Leu Trp Glu Ser Arg Asp Arg Tyr Glu Glu
99      410                      415                      420                      425
100     ctg aag cgg ata gat gac ggc atg aaa gag tta bag aag aag act gac      1348
101     Leu Lys Arg Ile Asp Asp Ala Met Lys Glu Leu Gln Lys Lys Thr Asp
102     430                      435                      440
103     agc ttg aag tct ggg ggc acc gag aag tcc aga ggg aga agc aga gat      1396
104     Ser Leu Thr Ser Gly Ala Thr Glu Lys Ser Arg Gly Arg Ser Arg Asp
105     445                      450                      455
106     gtg aaa aac agt gaa gga gac tgt ggc tgaggaaaagc ggggggggctg      1443
107     Val Lys Asn Ser Glu Gly Asp Cys Ala
108     460                      465
109     gatgagcttc tggacgggct ggcgagctg cgcgggctac ttgtgagggg aagagctgcc      1503
110     ctggggaacct ggcaccacaa gaccatggtt tctaagaacc atttt      1548
111     (210) SEQ ID NO: 2
112     (211) LENGTH: 466
113     (212) TYPE: PRT
114     (213) ORGANISM: Homo sapiens
115     (400) SEQUENCE: 1
116     Met Asp Ala Phe Arg Ser Thr Pro Tyr Lys Val Arg Pro Val Ala Ile
117     1                      5                      10                      15
118     Lys Gln Leu Ser Glu Arg Glu Glu Leu Ile Gln Ser Val Leu Ala Gln
119     20                      30                      35
120     Val Ala Glu Gln Phe Ser Arg Ala Phe Lys Ile Asn Glu Leu Lys Ala
121     40                      45                      50
122     Glu Val Ala Asn His Leu Ala Val Leu Glu Lys Arg Val Glu Leu Glu
123     55                      60
124     Gly Leu Lys Val Val Glu Ile Glu Lys Cys Lys Ser Asp Ile Lys Lys
125     65                      70                      75                      80
126     Met Arg Glu Glu Leu Ala Ala Arg Ser Ser Arg Thr Asn Cys Pro Cys
127     85                      90                      95
128     Lys Tyr Ser Phe Leu Asp Asn His Lys Lys Leu Thr Pro Arg Arg Asp
129     100                      105                      110
130     Val Pro Thr Tyr Pro Lys Tyr Leu Leu Ser Pro Glu Thr Ile Glu Ala
131     115                      120                      125
132     Leu Arg Lys Pro Thr Phe Asp Val Trp Leu Trp Glu Pro Asn Glu Met
133     130                      135                      140
134     Leu Ser Cys Leu Glu His Met Tyr His Asp Leu Gly Leu Val Arg Asp
135     145                      150                      155                      160
136     Phe Ser Ile Asn Pro Val Thr Leu Arg Arg Trp Leu Phe Cys Val His
137     165                      170                      175
138     Asp Asn Tyr Arg Asn Asn Pro Phe His Asn Phe Arg His Cys Phe Cys
139     180                      185                      190
140     Val Ala Gln Met Met Tyr Ser Met Val Trp Leu Cys Ser Leu Gln Glu
141     195                      200                      205
142     Lys Phe Ser Gln Thr Asp Ile Leu Ile Leu Met Thr Ala Ala Ile Cys
143

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/034,015A

DATE: 03/24/2003

TIME: 10:00:53

Input Set : N:\Crf4\03102003\J034015.raw

Output Set: N:\CRF4\03242003\J034015A.raw

```

144          210          215          220
145 His Asp Leu Asp His Pro Gly Tyr Asn Asn Thr Tyr Gln Ile Asn Ala
146      225          230          235          240
147 Arg Thr Glu Leu Ala Val Arg Tyr Asn Asp Ile Ser Pro Leu Glu Asn
148          245          250          255
149 His His Cys Ala Val Ala Phe Gln Ile Leu Ala Glu Pro Glu Lys Asn
150          260          265          270
151 Ile Phe Ser Asn Ile Pro Pro Asp Gly Phe Lys Gln Ile Arg His Gly
152          275          280          285
153 Met Ile Thr Leu Ile Leu Ala Thr Asp Met Ala Arg His Ala Glu Ile
154      290          295          300
155 Met Asp Ser Phe Lys Glu Lys Met Glu Asn Phe Asp Tyr Ser Asn Glu
156      305          310          315          320
157 Glu His Met Thr Leu Leu Lys Met Ile Leu Ile Lys Cys Cys Asp Ile
158          325          330          335
159 Ser Asn Glu Val Arg Pro Met Glu Val Ala Glu Pro Trp Val Asp Cys
160          340          345          350
161 Leu Leu Glu Glu Tyr Phe Met Gln Ser Asp Arg Glu Lys Ser Glu Gly
162          355          360          365
163 Leu Pro Val Ala Pro Phe Met Asp Arg Asp Lys Val Thr Lys Ala Thr
164      370          375          380
165 Ala Gln Ile Gly Phe Ile Lys Phe Val Leu Ile Pro Met Phe Glu Thr
166      385          390          395          400
167 Val Thr Lys Leu Phe Pro Met Val Glu Glu Ile Met Leu Gln Pro Leu
168          405          410          415
169 Trp Glu Ser Arg Asp Arg Tyr Glu Glu Leu Lys Arg Ile Asp Asp Ala
170          420          425          430
171 Met Lys Glu Leu Gln Lys Lys Thr Asp Ser Leu Thr Ser Gly Ala Thr
172          435          440          445
173 Glu Lys Ser Arg Gly Arg Ser Arg Asp Val Lys Asn Ser Glu Gly Asp
174          450          455          460
175 Cys Ala
176      465

```

```

178 <210> SEQ ID NO: 3
179 <211> LENGTH: 216
180 <212> TYPE: DNA
181 <213> ORGANISM: Homo sapiens
182 <220> FEATURE:
183 <221> NAME/KEY: misc_feature
184 <222> LOCATION: 130
185 <223> OTHER INFORMATION: N = A, T, G, or C
186 <220> FEATURE:
187 <221> NAME/KEY: misc_feature
188 <222> LOCATION: 186
189 <223> OTHER INFORMATION: N = A, T, G, or C
190 <220> FEATURE:
191 <221> NAME/KEY: misc_feature
192 <222> LOCATION: 205
193 <223> OTHER INFORMATION: N = A, T, G, or C

```

## RAW SEQUENCE LISTING

DATE: 03/24/2003

PATENT APPLICATION: US/10/034,015A

TIME: 10:09:53

Input Set : N:\Cr4\03102003\J034015.raw

Output Set: N:\CRF4\03242003\J034015A.raw

```

194 <400> SEQUENCE: 3
195      a:cgacngtg agaagtcaga aggccttcoo gtggaaocgt tcatggacog agacaaagtg 60
196      a:caagggca cagcccagat tgggttcato aagtttgocg tgatcccaat gtttgaaaca 120
W--> 197      gtgaccaagn tcttccccat ggttgaggag atcatgtgc agccactttg ggaatcccg 180
198      g:tcgntabg aggagctgaa gggntagat gaagccatga aagag 225
200 <210> SEQ ID NO: 4
201 <211> LENGTH: 158
202 <212> TYPE: DNA
203 <213> ORGANISM: Homo sapiens
204 <214> FEATURE:
205 <215> NAME/KEY: misc_feature
206 <216> LOCATION: 12
207 <217> OTHER INFORMATION: N = A, T, G, or C
208 <218> FEATURE:
209 <219> NAME/KEY: misc_feature
210 <220> LOCATION: 37
211 <221> OTHER INFORMATION: N = A, T, G, or C
212 <222> FEATURE:
213 <223> NAME/KEY: misc_feature
214 <224> LOCATION: 62
215 <225> OTHER INFORMATION: N = A, T, G, or C
216 <226> FEATURE:
217 <227> NAME/KEY: misc_feature
218 <228> LOCATION: 110
219 <229> OTHER INFORMATION: N = A, T, G, or C
220 <400> SEQUENCE: 4
W--> 221      gtaccagatc antgcccgca cagagctggc ggtccgntac aatgacatct caccgttgga 60
222      g:aaacaccca ctgggcccgtg gctttccaga tctctgcoga gcttgagtgn aacatcttct 120
223      ccaacatccc acctgatggg ttcaagcaga tccgacag 158
224 <210> SEQ ID NO: 5
225 <211> LENGTH: 98
226 <212> TYPE: DNA
227 <213> ORGANISM: Homo sapiens
228 <214> FEATURE:
229 <215> NAME/KEY: misc_feature
230 <216> LOCATION: 14
231 <217> OTHER INFORMATION: N = A, T, G, or C
232 <218> FEATURE:
233 <219> NAME/KEY: misc_feature
234 <220> LOCATION: 23
235 <221> OTHER INFORMATION: N = A, T, G, or C
236 <222> FEATURE:
237 <223> NAME/KEY: misc_feature
238 <224> LOCATION: 50
239 <225> OTHER INFORMATION: N = A, T, G, or C
240 <400> SEQUENCE: 5
W--> 242      gagaacacca ctgngccgtg gnettcacaga tctctgcoga gcttgagtgn aacatcttct 60
243      ccaacatccc acctgatggg ttcaagcaga tccgacag 98
244 <210> SEQ ID NO: 6

```

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/10/034,015A

DATE: 03/24/2003  
TIME: 10:09:54

Input Set : N:\Crf4\03102003\J034015.raw  
Output Set: N:\CRF4\03242003\J034015A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:3; N Pos. 130,186,205  
Seq#:4; N Pos. 12,37,62,110  
Seq#:5; N Pos. 14,22,50  
Seq#:6; N Pos. 1,267,352,400,411  
Seq#:7; N Pos. 1,82,92,130,347,390,396  
Seq#:8; N Pos. 63,98,107,188,203,206,238,252,297,370,389,427  
Seq#:11; N Pos. 155,393,442

## VERIFICATION SUMMARY

DATE: 03/24/2003

PATENT APPLICATION: US/10/034,015A

TIME: 10:09:54

Input Set : N:\Crf4\03102003\J034015.raw

Output Set: N:\CRF4\03242003\J034015A.raw

L:197 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:120  
M:341 Repeated in SeqNo=3  
L:221 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0  
M:341 Repeated in SeqNo=4  
L:242 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0  
L:270 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:0  
M:341 Repeated in SeqNo=6  
L:311 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0  
M:341 Repeated in SeqNo=7  
L:374 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:60  
M:341 Repeated in SeqNo=8  
L:423 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:120  
M:341 Repeated in SeqNo=11

**STATISTICS SUMMARY**

DATE: 03/24/2003

PATENT APPLICATION: US/10/034,015A

TIME: 10:09:54

Input Set : N:\CrF4\03102003\J034015.raw

Output Set: N:\CRF4\03242003\J034015A.raw

Application Serial Number: US/10/034,015A

Alpha or Numeric or Xml: Numeric

Application Class:

Application File Date: 12-20-2001

Art Unit: OIPE

Software Application: PatentIN2.0

Total Number of Sequences: 26

Total Nucleotides: 11625

Total Amino Acids: 2452

Number of Errors: 0

Number of Warnings: 22

Number of Corrections: 0

**MESSAGE SUMMARY**

341 W: 22 ((46) "n" or "Xaa" used)